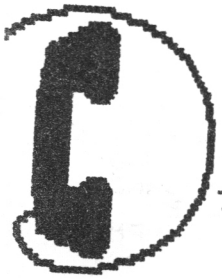
LISTing Newsletter

Newsletter of the Long Island Sinclair/Timex Users Group
(Incorporating N.Y.T.S.E.)



Announcing A New BBS
K.T.S. BBS: Supporting
IBM, TIMEX, ALL OTHERS
BAUD 300/1200/2400
Phone (516) 698-0461
Time (NY) 10:00 P.M.--8:00 A.M. Everyday

September 1992

NEXT MEETING SUNDAY SEPT. 13,1992

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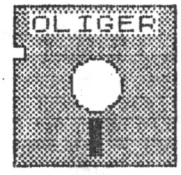

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Listing Policy

Annual Dues...$ 16.00

One "sample" copy sent upon reciept of a large SASE.
Copies provided on EXCHANGE BASIS with other bona fide user groups.
LISTing is published monthly except July and August by LIST (Long Island Sinclair Timex) Group, a non profit user group.

We are always looking for articles, programs, reviews, etc. to keep our members informed and entertained. You maintain full copyright.

LIST disclaimes any responsibility for any damage you may do to your computer as a result of reading any articles in LISTing.

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NYTSE

NYTSE MEETS ON MONDAY THE WEEK AFTER THE LIST MEETING AT;
MISS KIMS RESTAURANT
PARK AVENUE SOUTH
BETWEEN 21 ST. AND 22 ST.
MEETINGS START 7:30 PM.

COMING EVENTS:

SEPT. 13, 1992 LIST MEETING.
SEPT. 21, 1992 NYTSE MEETING

MEETING MINUTES
REPORTED BY:
FRED AND MICHAEL STERN

JUN. 14, 1992

HARVEY CALLED THE MEETING TO ORDER AT 2:30PM.

IN JULY, A SPECIAL PROGRAM EDITION OF LISTING WILL BE PUBLISHED TO REPLACE THE FEBRUARY ISSUE.

IN OUR CORRESPONDENCE WE RECEIVED 1 NEW MEMBER, AND A RENEWAL.

WE RECEIVED WORD THAT COMPUTER MONTHLY IS ELIMINATING THE CLASSIC COMPUTER SECTION. THIS DECISION BY COMPUTER MONTHLY IS NOT IN THE BEST INTEREST OF THE READERS.
THE CLASSIC COMPUTER SECTION WAS ONE OF THE FEW SOURCES OF FRESH INFORMATION FOR NOT ONLY THE TIMEX/SINCLAIR, BUT ALL OTHER ORPHANED, AND NON-IBM TYPE PERSONNEL COMPUTERS.
IF YOU ARE A SUBCRIBER TO COMPUTER MONTHLY, LET YOUR FEELINGS BE KNOWN ABOUT THEIR DECISION.
WRITE THEM AT:
COMPUTER MONTHLY
BOX 55886
BIRMINGHAM, AL. 3225-9951,

SWAP MEET

BEFORE AND AFTER THE MEETING, WE HELD THE SWAPMEET. DESPITE THE LOW ATTENDANCE, GREAT BARGAINS WERE FOUND.
TS1500 AND TS2068 WERE BOUGHT AND SOLD. PRINTERS AND SOFTWARE WERE ALSO ON SALE.

OTHER HAPPENINGS

IN JULY, A SWAPMEET WAS ALSO HELD ON THE GROUNDS OF NEW YORK INSTITUTE OF TECHNOLOGY, AND SPONSERED BY THE LONG ISLAND MOBILE AMATEUR RADIO CLUB (LIMARC). MORE ON THIS SWAPMEET AT THE NEXT MEETING.

CLASSIFIEDS

THIS CLASSIFIED SECTION IS AVAILABLE TO ALL LIST MEMBERS FREE OF CHARGE.
THE ONLY RESTRICTION IS THAT IT IS TO BE USED ONLY FOR THE SEEKING, SELLING OR SWAPPING OF SINCLAIR, TIMEX OR MICROACE COMPUTER EQUIPMENT, PERIPHERALS AND SOFTWARE.
LISTING, LIST, AND ITS OFFICERS DO NOT ENDORSE, WARRANTY, OR GUARANTEE ANY OF THE ITEMS LISTED IN THIS CLASSIFIED SECTION

I HAVE MERCHANDICE OF INTEREST TO THE TIMEX/SINCLAIR HACKER AND EXPERIMENTER. SEND A S.A.S.E TO
VAN S. VANGOR
346 C. RETREAT ROAD
ISLAND FALLS, MAINE. 04747
FOR MY LIST AND PRICES.

THE FOLLOWING PUBLICATIONS ARE AVAILABLE ONLY THROUGH LIST:

ZX-81/TS1000 TECHNICAL TIDBITS
TECHNICAL TIDBITS PART II
SAVINGS AND LOAD OF THE TIMEX COMPUTER
$4.00 EACH.

I AM INTERESTED IN AN AERCO DISK SYSTEM FOR THE TS1000 OR TS2068. FRED STERN; 516-737-963 OR WRITE ME AT THE ADDRESS ABOVE.

A FINAL WORD

MY NAME IS FRED STERN AND I AM THE EDITOR OF THIS EDITION OF LISTING.

LISTING STILL NEEDS A QL REPORTER. IF YOU WANT UP TO DATE INFORMATION ON WHAT IS HAPPENING WITH THE QL, CONSIDER REPORTING IT TO YOUR FELLOW SINCLAIRISTS. IF YOU ARE INTERESTED IN THIS POSITION, CONTACT ME:
FRED STERN.

SPECIAL THANKS ARE EXTENDED TO; MICHAEL STERN, AND TOM SKAPINSKI WHO DID A *DYNOMITE*JOB IN HELPING TO GET THIS NEWSLETTER OUT.

2068 SECOND SCREEN

(with a 1000 supplement)

Dale Fritz, SEATUG

(reprinted from SWYM, Mar/Apr 1992)

Most of us know that the 2068 has a second independent screen known as Display File 2 (see page 248 of the 2068 User Manual), but methods to easily use this screen are not widely known. My interest was aroused after drawing some elaborate Hilbert Curves on the main screen.

I wanted to print a Menu to give choices of Copy or Continue in various modes. The Menu would destroy the main screen and there wasn't much room in Lines 22 and 23 for Menu. How could I use the second screen for my Menu and then go back to the first screen with my picture intact? The 2068 Technical Manual, Appendix C, has 16 pages o f machine code concerning the second screen, where one can Clear Screen, Set Cursor, Print Character, Scroll, etc.

My needs were much more modest. Stan Lemke, of Desktop Publishing fame, published a small program, "Blink", in SyncWare News which considerably simplifies use of the second screen. There are three routines:

A. Read a modest amount of data from a Data statement and initiate the second screen.

B. Build a Menu (or whatever) on the main screen and transfer it to screen 2.

C. Bring screen 2 back to screen 1 for editing and improvement. Use routine B to return the improved version to screen 2.

As one could guess, there are some limitations. LIST, PRINT, PLOT, DRAW, etc. will not work in display File 2. Even more disconcerting, you can't get any messages from the computer when using the second screen. All the messages are being printed on the main screen and you aren't there. The answer, say in case of a Menu, is to provide safeguards around an adequate INPUT response and get back to the main screen.

There are two main commands

OUT 255,0

brings in the main screen. (Display File 1)

and

OUT 255,1

which brings in the second screen. (Display File 2)

Routine A

```
8990 REM ..SR A-INIT 2nd SCN..
9000 DATA 46, 0, 62, 1, 211, 244, 219, 255, 203, 255, 211, 255, 62, 6, 245, 251, 205, 142, 14, 219, 255, 203, 191, 211, 255, 175, 211, 244, 241, 254, 128, 32, 4, 50, 91, 104, 251, 201, 33, 0, 64, 17, 0, 96, 1, 0, 27, 237, 176, 201, 33, 0, 96, 17, 0, 64, 24, 242
9010 FOR i=23383 TO 23440: READ a: POKE i,a NEXT i: RANDOMIZE USR 23383: OUT 255,0: RETURN
```

Routine B

```
9090 REM ..SR B-SCN 1. to SCN 2..
9100 RANDOMIZE USR 23421: RETURN
```

Routine C

```
9190 REM ..Sn C-SCN 2 to SCN 1..
9200 RANDOMIZE USR 23433: RETURN
```

Here is a short demo which plots a circle on screen 1 and gives a COPY, CONTINUE Menu in screen 2. To improve the Menu, GOTO 500. If you BREAK while the Menu is on the screen, enter OUT 255,0.

```
10 REM ..SCREEN 2 DEMO..
20 REM CODED Dale Fritz, SEATUG
90 REM ..INITIATE..
100 GO SUB 9000
110 PRINT AT 3,10; "MENU"; AT 5,8 ; "0. VIEW SCREEN"; AT 6,8; "1. COPY"; AT 7,8; "2. CONTINUE"; AT 18,0; "Enter Choice"
120 GO SUB 9100
190 REM ..MAIN PROGRAM..
```

2068 SECOND SCREEN

(with a 1000 supplement)

Dale Fritz, SEATUG

```
200 CLS: LET x=132: LET y=87: LET
r=5 210 FOR i=1 TO 10: CIRCLE x,y,r
220 PAUSE 75: OUT 255,1
230 LET z$=INKEYS: IF z$="" THEN GO TO 230
240 IF CODE z$<48 OR CODE z$>51 THEN GO 230
250 OUT 255,O
260 IF z$="0" THEN PAUSE 0
270 IF z$="1" THEN COPY: GO TO 290
280 IF z$="3" THEN STOP
290 LET r=r+5: NEXT i
300 STOP
490 REM ..ADD TO MENU..
500 GO SUB 9200: PRINT AT 8,8;" 3. STOP" .
510 GO SUB 9100: PAUSE 50: GO TO 200
```

LIST

Long Island Sinclair

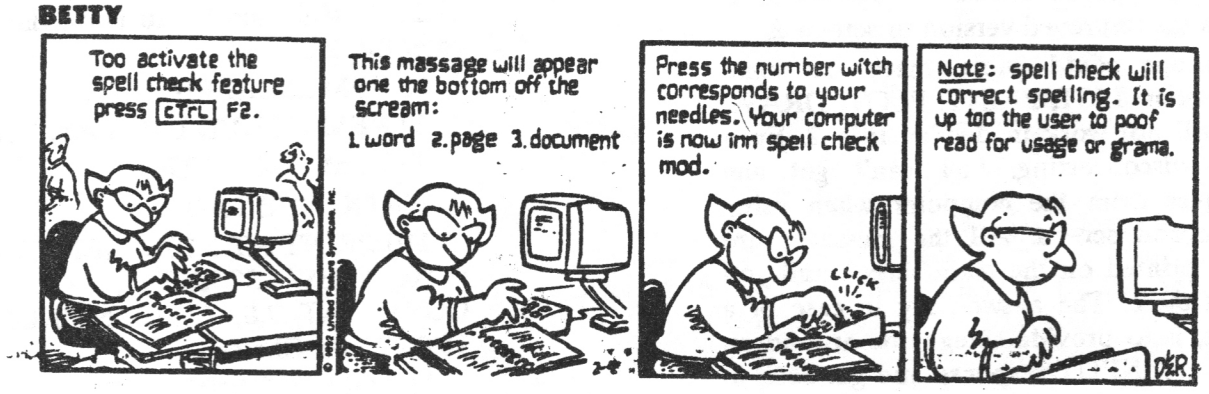
TIMEX User Group

1000 SUPPLEMENT

One can save and immediately print back screens with the 1000. It involves saving the screen in a string, then simply printing the string to restore the screen. Consider the main screen as A$ and the second screen as B$. Using the following routines and PRINT A$, PRINT B$, a very comparable demo to that above could be made.

```
8990 REM ..SAVE MAIN SCREEN..
9000 DIM A$(704)
9010 FOR K=0 TO 21
9020 FOR L=1 TO 3Z
9030 LET A$(L+32*K)=CHR$ PEEK (PEEK 16397 + 256 * PEEK 16397 + L + 33 * K)
9040 NEXT L.
9050 NEXT K
9060 RETURN
9090 REM ..SAVE SECOND SCREEN..
9100 DIM B$(704)
9150 NEXT K
9160 RETURN
```

Postscript: Alternately, there is a 2068 WINDOWS Demo in the SEATUG Library, which could be studied and used for a Menu instead of the second screen. However, if I had remembered that sooner, we would not have had these neat screen subroutines.



EAST OF THE PARALLEL, WEST OF THE SERIAL by John Pazmino

... a duck. You see, to speak PostScript with the Sinclair, you do need a printer that understands PostScript. You just knew there was some vital & fatal element, didn't you! A 'PostScript printer' is a printer that has within it the animus of PostScript, the wherewithall to turn the PostScript ASCII code into those lucious pages you want. Some models, like the original LaserWriter, have PostScript welded shut inside; it can't get out. Others, like the HP LaserJet, take on the PostScript demeanor by a plugin cartridge. Still others have a socket to accept a ROM inscribed with PostScript. In all cases, the printer also functions in some native mode, typically IBM Graphics or LaserJet. It is set to PostScript by however means the printer instructions tell you. Make sure the printer is de acto atque facto in PostScript mode. In native mode you get only a regular printout of the very code you send to it.

The printer will almost always be a laserprinter, which produces its output much like a photocopier. The image is first deployed in the onboard memory and then splatted in one blow onto the paper. For curiosity's sake, the minimum memory for PostScript to compose and store a letter page is 1-1/2Mb; it's 2Mb for a legal page. If the printer at hand does function properly in PostScript mode it already got enough memory, at least for letter pages.

The base standard resolution of the laserprinter is 120 pixels or 'dots' per centimeter. You must look closely under a loupe to see any jagged edges in the output. The newer models offer 180 or 240 d/cm. This approaches the quality of orthodox typesetting.

I understand fully well that you are unlikely to have at home a PostScript printer. And it is improbable you are fixing to get one soon. They still are rather pricey as home appliances. On the other hand, against the phototypesetting engine, the only other viable alternative, a PostScript printer is astoundingly cheap. So cheap that factories are running full tilt to meet the demand.

If you're itching anyway to get hold of one for yourself, do consider. A used LaserJet nowadays costs about $600; a PostScript cartridge is about $300 (they come with a bunch of character sets); a 2Mb RAM card for the LaserJet is about $200. Hence $1100 and a bit of luck gets you a PostScript printer. For the gadgeteer in you, there's a book on the street telling you how to build from surplus parts a PostScript printer for around $800. In any case, you can drive the mother thru a $35 Sinclair. And this is a good thing.

However, PostScript printers are common at work or school and you may be allowed to play with one of them. Let's be considerate. What ever you do with the printer, make very sure you restore it to its original settings before you release it for others to use. You really don't want angry associates, do you? For the record, I myself use at work an HP LaserJet II fitted with an Adobe PostScript cartridge.

Naively you bring your Sinclair to the printer and cable the two together. You'll earn a lot of condolence lunches for sure. Because the stock Sinclair has no printer port you need an interface. Get one that matches the cable already attached to the printer, be it serial or parallel. ByteBack and Gray & Clifford are good brands of serial interface. Aerco and Tasman are standard parallel interfaces. You may also need a 9/25-pin adaptor for the serial port cable.

Serial ports normally expect a telcomms program to talk thru them.

Use Mterm or Specterm in their 'terminal' mode. Due to the slow speed of the Sinclair, you must set the parms, on both the computer and the printer, to 1200bps, 8-N-1 xon/xoff. (Serial printers are usually preset to 4800bps or 9600bps.) To send code to the printer, either type it in at the keyboard or upload it as a prepared file by a 'text' or 'ASCII' transfer.

When a telcomms application is the vehicle to talk to the printer you have an added potential. Most PostScript printers can act like a 'remote' or 'host'. You type in the commands and the printer kicks back a response at the instant, much like when you talk to a regular remote computer.

Parallel ports do better with wordprocs or plain BASIC. Write the code into a document and do a 'print' on it within the wordproc. No printer driver is needed because you are sending only ASCII characters with no hidden codes. In BASIC put the code into LPRINT statements and then run the program.

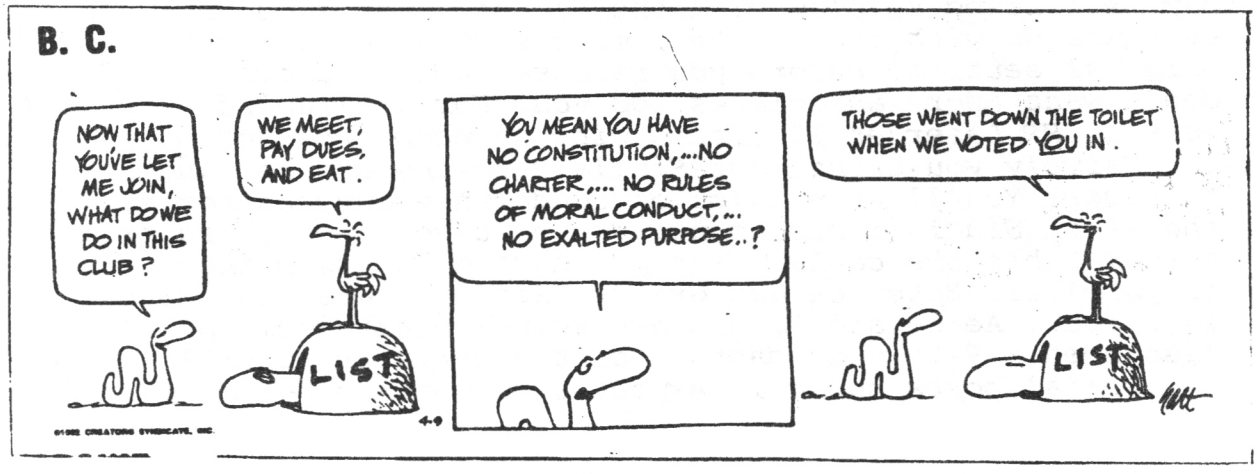
Where it is impractical or impossible to get the Sinclair and the printer together, there is a way out. Write the code at home on the Sinclair and upload it to a BBS as a private file addressed to you. At the printer's computer download the file to disc, where it behaves like a natively written file. Send this file, by the normal functions of that computer, to the printer. The both computers, obviously, must be fitted out for telcomms in the first place.

This up & down loading is the only way to meld the Sinclair to a PostScript implemented in the computer rather than in the printer. Such is accomplished by plugin cards or software on disc. Because in this scheme there is no PostScript animus in the printer, tying the Sinclair to it will not get you any PostScript capability. You must get your Sinclair ASCII file into the computer itself via the up & down loading trick.

You're drumming your fingers, eh? What's the matter? Oh? The fonts? What about them? Where are they? Ah!, the fonts! Yes, yes, yes, the fonts. Erm, the fonts.

Not a worry here. All PostScript printers come with a selection of fonts, a dozen. or a score. These are onboard and ready to call up as you need. There's nothing special to do. You do not need fonts from other sources, at least not for the initial experiments. The onboard fonts are Times-Roman, Helvetica, and Courier, plus some others which vary from printer to printer. Times-Roman looks like newspaper type. Helvetica is like direction signs for highways and transport depots. Courier mimics an old typewriter style.

Well, are you ready for PostScript? All systems are go. Countdown for launch. 9, 8, 7, 6. We got ignition! 5, 4, 3, ...



QL CORNER

Great News!

This month I am reporting items that have appeared in the Anniversary Issue of the International QL Report, published by SeaCost Services, 15 Kilburn Court, Newport, Rhode Island 02840, Publisher Bob Dyl.

Miracle Systems, England, advertised the Gold Card for sale at £200.00, approximately $350.00 - $375.00 (based upon the current rate of exchange) purchased directly from them. Also, the Trump Card, 768K memory version for £65.00, approximately $110.00 - $130.00 as per current exchange rate. Both of these interfaces are NEW! - not refurbished units.

If you have an unexpanded QL and have been thinking about upgrading your QL, NOW IS THE TIME! I have ordered quite a few products from Miracle Systems in the past. They are honest, ship immediately upon receipt of an order and stand behind their products.

Another interesting item appearing in IQLR is that a second source manufacturer is developing a mid-range VGA graphics card for the QL and will be offered by QUANTA and Jochen Merz Software, Germany.

Miracle Systems is also developing a hi-res graphics card with a parallel port. Now hold onto your hat! Miracle reported that they expect to have a card which will enable PC and PC clone owners to run QL software using Tony Teby's SMS-2 QDOS clone.

There is so much NEW information, contained in every issue of The International QL Report - if you don't subscribe to this publication, you're missing the "boat". Subscription rate for USA is $14.95. The IQLR address is listed in the first paragraph.

.....Bob Gilder L.I.S.T. GROUP

DIG THOSE DIGERATI

A WHITE PUFF OF SMOKE HAS gone up over Lexicon Central: we have a coinage!

"I call your attention," writes Jason McManus, editor in chief of Time Warner, "to a neologism to me: *digerati*. This occurs in the New York Times Business section in an article by John Markoff, who refers to George Gilder's writings as being 'taken seriously among the computer digerati.' It did make me smile with appreciation in the trust it was Mr. Markoff's invention to lighten up a highly technical story."

***Literati*, Italian for the Latin *litterati*, "learned," means "the intellectual set." In the late 1930's, a portmanteau word was formed to blend the world of glittering celebrities with these intellectuals: *glitterati*.**

Now all that glitters is *digital*, from the Latin for "finger," and later applied to a number that can be counted on the 10 fingers. Hence, *digerati*, "computer intellectuals," a word sure to flash through the world's electronic mailboxes.

My colleague Mr. Markoff confirms that the term was first used in his story, but — honest fellow — attributes coinage to the usually anonymous "backfield" editor, Tim Race.

The coiner has the right to set down the definition. According to Mr. Race, it goes: "Digerati, *n.pl.*, people highly skilled in the processing and manipulation of digital information; wealthy or scholarly techno-nerds." ■

ILLUSTRATION BY PETER KUPER

TS2068 JOYSTICK OPERATION

The two joysticks are controlled via Register 14 (I/O Port A) of the Programmable Sound Generator Chip (see Sections 2.1.6 and 2.1.7). Address and data are passed via Ports 0F5H and 0F6H respectively. The joysticks are read by first addressing Register 14 in the PSG by writing a 14 (0EH) to Port 0F5H. The data is then read by executing an IN from Port 0F6H, having the port address in Z80 Register C and the joystick (player) number in Register B (number = 1 or 2). Note that PSG Register 7, Bit 6 is assumed to be zero, enabling I/O Port A for input. If you ever use I/O Port A for output (R7,B6=1), you will want to clear Bit 6 prior to any input operation.

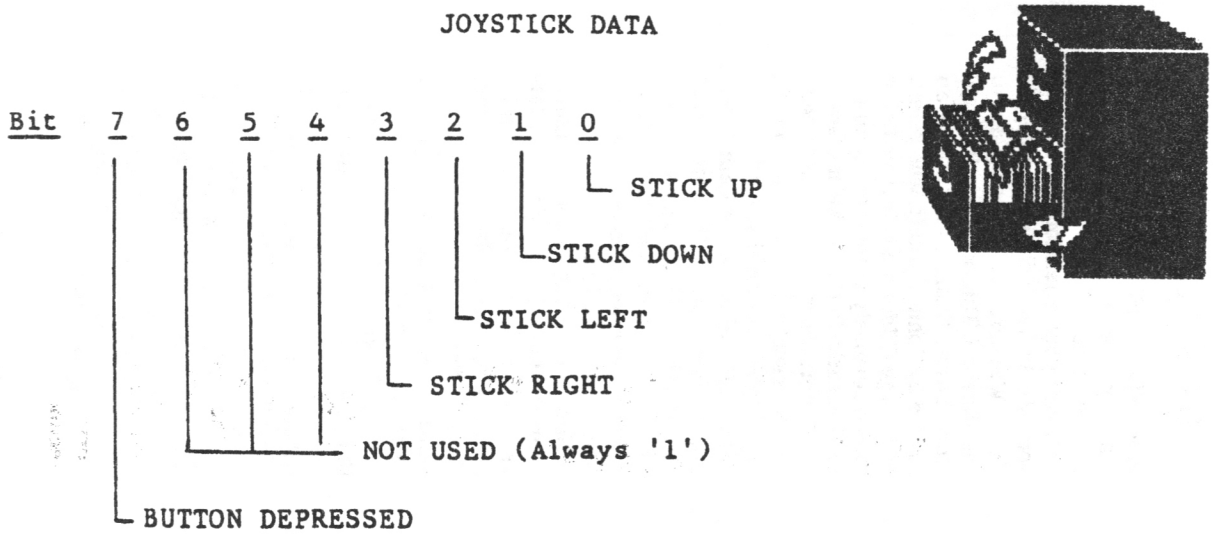
Sample routine:

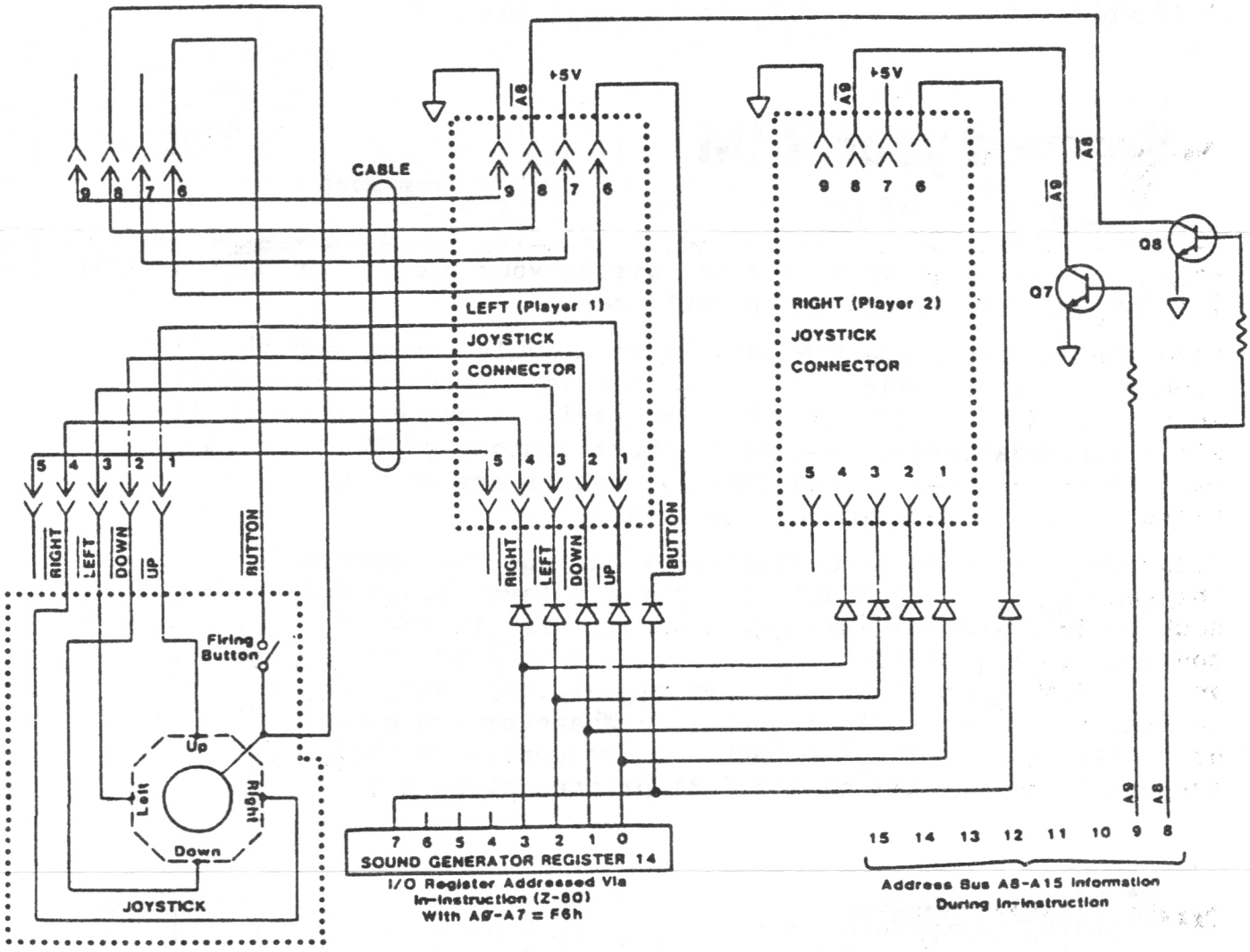
```
GETJOY  LD    A,0EH          Load A = 14
        OUT   A,(0F5H)       Address the joystick port
        LD    B,playerno
        LD    C,0F6H         Data Port address to C
        IN    A,(C)          Joystick data to A
        CPL                  Complement to High Active
        AND   8FH            Get significant bits
```

The data read is LOW ACTIVE, i.e. all bits = 1 (byte=FFH) when the stick is at center and the button is not depressed. Figure 4.3-1 shows the interpretation of the data byte.

FIGURE 4.3-1

JOYSTICK DATA





JOYSTICK PORT OPERATION

I AM INTERESTED IN AN AEROL DISK
SYSTEM FOR THE T1000 OR T1200.
FRED STERN; 516-737-863

Getta Betta Jack

Some users have reported that the jack plugs provided on the cassette and power supply leads can cause problems because of poor connections. If this happens then it can be very annoying as even the shortest break in the power supply to the ZX81 will wipe out your program, while erratic cassette connections can ruin a recording or frustrate your attempts to LOAD. Replacing the plugs (they are 3.5mm types), or even soldering the wires directly to the ZX81 PCB, is the only solution.

Support your RAM

The main cause of problems with Sinclair's 16K RAM pack are the connections between it and the ZX81. Even the slightest momentary fault here is liable to corrupt your program or put the ZX81 into its notorious 'white-out' mode.

Unfortunately, the RAM pack is relatively heavy, and the ZX81 is mounted on resilient feet, so that any pressure on the ZX81's keyboard will rock the whole assembly, a procedure which is almost guaranteed to find any poor contacts ! The problem is made worse because the ZX81's contacts are only tinned, not gold plated, and so oxidise very easily.

Techniques used successfully by various ZX81 owners involve thickening the contacts by adding a layer of solder, adding a double-sided gold plated plug extension to the ZX81, cleaning the contacts regularly, fitting a supporting bracket between the ZX81 and the RAM pack to fix them rigidly together, and even soldering the two permanently together ! Whatever you choose to do, try not to remove the RAM pack too frequently as this only wears down the contacts on the ZX81 printed circuit board.

Spiky Mains

If your ZX81 keeps crashing or corrupting its program for no apparent reason, suspect large voltage spikes on the mains supply. They are usually caused by electric motors - as in your air conditioning, refrigerator or washing machine - being turned on or off. If you can identify which machine is causing the spikes then you may be able to plan your computing time along the lines of;

IF NOT WASHINGMACHINEON THEN COMPUTE

Using another mains outlet may help, or it may make things worse The ultimate solution is to fit a mains filter in the supply lead to your ZX81 and TV, they are often advertised in most computing and electronics magazines.